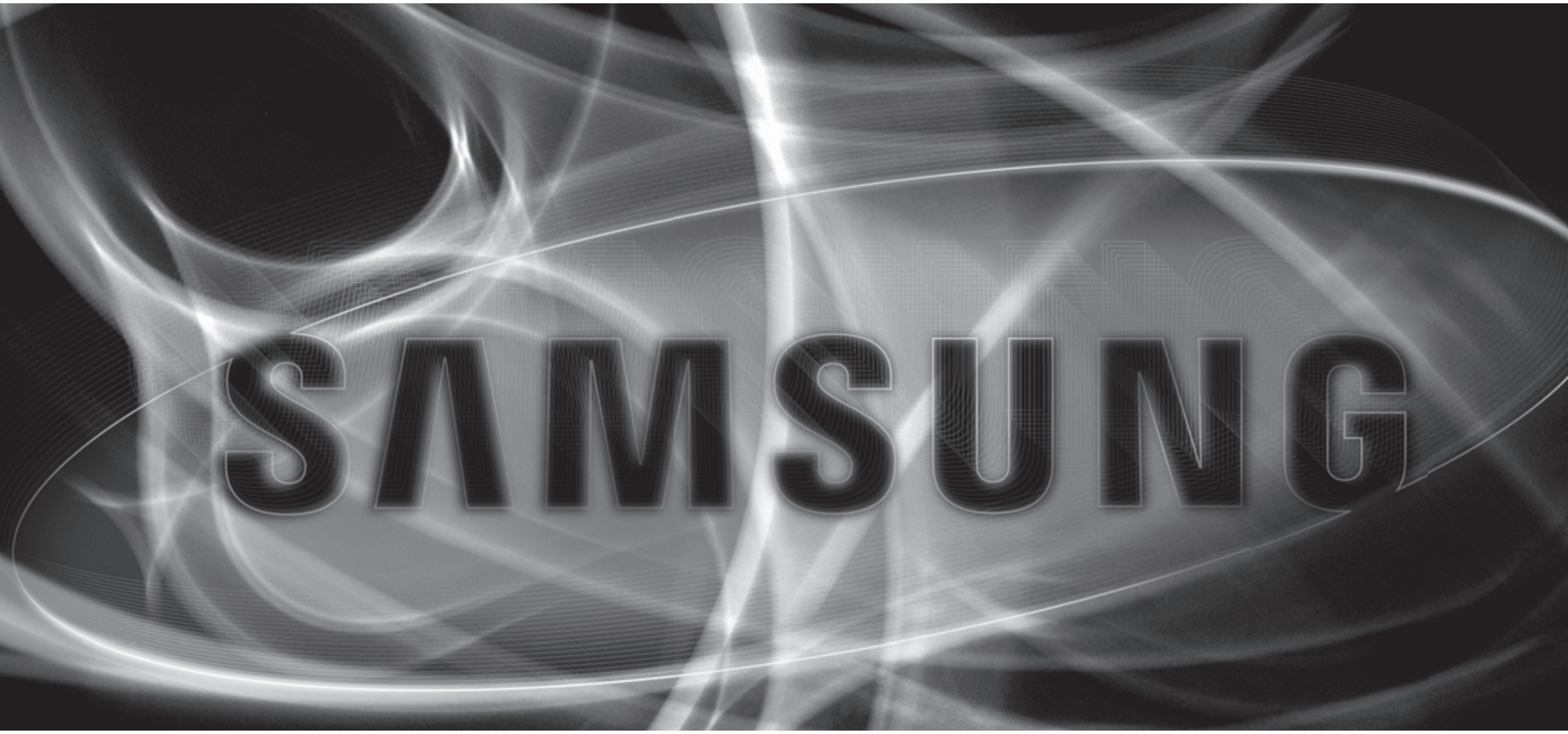
SAMSUNG TECHWIN

Compact High Resolution ATM Camera

User Manual

SCB-3020
SCB-2020



SAMSUNG

Compact High Resolution ATM Camera

User Manual

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Warranty

If the product does not operate properly in normal conditions, please let us know. Samsung Techwin will resolve the problem for free of charge. The warranty period is 3 years. However, the followings are excluded:

- If the system behaves abnormally because you run a program irrelevant to the system operation.
- Deteriorated performance or natural worn-out in process of time

Safety information

CAUTION

RISK OF ELECTRIC SHOCK.DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK) NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

THIS SYMBOL INDICATES THAT DANGEROUS VOLTAGE CONSISTING A RISK OF ELECTRIC SHOCK IS PRESENT WITHIN THIS UNIT.

THIS EXCLAMATION POINT SYMBOL IS INTENDED TO ALERT THE USER TO THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE (SERVICING) INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE APPLIANCE.

WARNING

- TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.
- TO PREVENT INJURY, THIS APPARATUS MUST BE SECURELY ATTACHED TO THE FLOOR/WALL IN ACCORDANCE WITH THE INSTALLATION INSTRUCTIONS.
- IF THIS POWER SUPPLY IS USED AT 240V AC, A SUITABLE PLUG ADAPTER SHOULD BE USED.

WARNING

1. BE SURE TO USE ONLY THE STANDARD ADAPTER THAT IS SPECIFIED IN THE SPECIFICATION SHEET. USING ANY OTHER ADAPTER COULD CAUSE FIRE, ELECTRICAL SHOCK, OR DAMAGE TO THE PRODUCT.
2. INCORRECTLY CONNECTING THE POWER SUPPLY OR REPLACING BATTERY MAY CAUSE EXPLOSION, FIRE, ELECTRIC SHOCK, OR DAMAGE TO THE PRODUCT.

Safety information

3. DO NOT CONNECT MULTIPLE CAMERAS TO A SINGLE ADAPTER. EXCEEDING THE CAPACITY MAY CAUSE ABNORMAL HEAT GENERATION OR FIRE.
4. SECURELY PLUG THE POWER CORD INTO THE POWER RECEPTACLE. INSECURE CONNECTION MAY CAUSE FIRE.
5. WHEN INSTALLING THE CAMERA, FASTEN IT SECURELY AND FIRMLY. THE FALL OF CAMERA MAY CAUSE PERSONAL INJURY.
6. DO NOT PLACE CONDUCTIVE OBJECTS (E.G. SCREWDRIVERS, COINS, METAL PARTS, ETC.) OR CONTAINERS FILLED WITH WATER ON TOP OF THE CAMERA. DOING SO MAY CAUSE PERSONAL INJURY DUE TO FIRE, ELECTRIC SHOCK, OR FALLING OBJECTS.
7. DO NOT INSTALL THE UNIT IN HUMID, DUSTY, OR SOOTY LOCATIONS. DOING SO MAY CAUSE FIRE OR ELECTRIC SHOCK.
8. IF ANY UNUSUAL SMELLS OR SMOKE COME FROM THE UNIT, STOP USING THE PRODUCT. IN SUCH CASE, IMMEDIATELY DISCONNECT THE POWER SOURCE AND CONTACT THE SERVICE CENTER. CONTINUED USE IN SUCH A CONDITION MAY CAUSE FIRE OR ELECTRIC SHOCK.
9. IF THIS PRODUCT FAILS TO OPERATE NORMALLY, CONTACT THE NEAREST SERVICE CENTER. NEVER DISASSEMBLE OR MODIFY THIS PRODUCT IN ANY WAY. (SAMSUNG IS NOT LIABLE FOR PROBLEMS CAUSED BY UNAUTHORIZED MODIFICATIONS OR ATTEMPTED REPAIR.)
10. WHEN CLEANING, DO NOT SPRAY WATER DIRECTLY ONTO PARTS OF THE PRODUCT. DOING SO MAY CAUSE FIRE OR ELECTRIC SHOCK.

CAUTION

1. DO NOT DROP OBJECTS ON THE PRODUCT OR APPLY STRONG BLOWS TO IT. KEEP AWAY FROM A LOCATION SUBJECT TO EXCESSIVE VIBRATION OR MAGNETIC INTERFERENCE.
2. DO NOT INSTALL IN A LOCATION SUBJECT TO HIGH TEMPERATURE (OVER 50°), LOW TEMPERATURE (BELOW -10°), OR HIGH HUMIDITY. DOING SO MAY CAUSE FIRE OR ELECTRIC SHOCK.
3. IF YOU WANT TO RELOCATE THE ALREADY INSTALLED PRODUCT, BE SURE TO TURN OFF THE POWER AND THEN MOVE OR REINSTALL IT.
4. REMOVE THE POWER PLUG FROM THE OUTLET WHEN THERE IS A LIGHTING STORM. NEGLECTING TO DO SO MAY CAUSE FIRE OR DAMAGE TO THE PRODUCT.
5. KEEP OUT OF DIRECT SUNLIGHT AND HEAT RADIATION SOURCES. IT MAY CAUSE FIRE.
6. INSTALL IT IN A PLACE WITH GOOD VENTILATION.
7. AVOID AIMING THE CAMERA DIRECTLY TOWARDS EXTREMELY BRIGHT OBJECTS SUCH AS SUN, AS THIS MAY DAMAGE THE CCD IMAGE SENSOR.
8. APPARATUS SHALL NOT BE EXPOSED TO DRIPPING OR SPLASHING AND NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHALL BE PLACED ON THE APPARATUS.
9. THE MAINS PLUG IS USED AS A DISCONNECT DEVICE AND SHALL STAY READILY OPERABLE AT ANY TIME.

FCC STATEMENT

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS :

1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND

Safety information

2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.

Caution

THIS EQUIPMENT HAS BEEN TESTED AND FOUND TO COMPLY WITH THE LIMITS FOR A CLASS A DIGITAL DEVICE, PURSUANT TO PART 15 OF FCC RULES. THESE LIMITS ARE DESIGNED TO PROVIDE REASONABLE PROTECTION AGAINST HARMFUL INTERFERENCE WHEN THE EQUIPMENT IS OPERATED IN A COMMERCIAL ENVIRONMENT.
THIS EQUIPMENT GENERATES, USES, AND CAN RADIATE RADIO FREQUENCY ENERGY AND, IF NOT INSTALLED AND USED IN ACCORDANCE WITH THE INSTRUCTION MANUAL, MAY CAUSE HARMFUL INTERFERENCE TO RADIO COMMUNICATIONS. OPERATION OF THIS EQUIPMENT IN A RESIDENTIAL AREA IS LIKELY TO CAUSE HARMFUL INTERFERENCE IN WHICH CASE THE USER WILL BE REQUIRED TO CORRECT THE INTERFERENCE AT HIS OWN EXPENSE.

IC COMPLIANCE NOTICE

THIS CLASS A DIGITAL APPARATUS MEETS ALL REQUIREMENTS OF THE CANADIAN INTERFERENCE.-CAUSING EQUIPMENT REGULATIONS OF ICES-003.

Safety information

Correct Disposal of This Product (Waste Electrical & Electronic Equipment)

(Applicable in the European Union and other European countries with separate collection systems)

This marking on the product, accessories or literature indicates that the product and its electronic accessories (e.g. charger, headset, USB cable) should not be disposed of with other household waste at the end of their working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take these items for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product and its electronic accessories should not be mixed with other commercial wastes for disposal.

Correct disposal of batteries in this product

(Applicable in the European Union and other European countries with separate battery return systems.)

This marking on the battery, manual or packaging indicates that the batteries in this product should not be disposed of with other household waste at the end of their working life. Where marked, the chemical symbols Hg, Cd or Pb indicate that the battery contains mercury, cadmium or lead above the reference levels in EC Directive 2006/66. If batteries are not properly disposed of, these substances can cause harm to human health or the environment.

To protect natural resources and to promote material reuse, please separate batteries from other types of waste and recycle them through your local, free battery return system.

Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus.
13. Unplug this apparatus when a card is used. Use caution when moving the cart/ apparatus combination to avoid injury from tip-over.

14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as powersupply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus

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Introduction

Features

❖ High Resolution

- High Resolution This camera has realized high resolution of 600 lines using the top-of the range full digital image processing and special algorithm technologies.

❖ VPS(Virtual Progressive Scan)

- This is an advanced technology that reproduces a sharp progressive image. This is appropriate to high quality recording and file transfer via the Internet. (※ For SCB-2020, the VPS option is not available.)

❖ Intelligent Motion Detection & Tracking

- This is an intelligent function that automatically detects a motion of an object. You can set a virtual fence so it sounds an alert if an object passes / enters /exits the virtual fence or virtual area.

❖ WDR

- WDR extends the contrast range as it takes a picture of each of dark and bright areas before compositing the two, which is useful if you take a picture of windows inside a building. Namely, it improves the picture quality of the outdoor scenery as well as indoor. (※ For SCB-2020, the WDR mode is not available.)

❖ XDR (eXtended Dynamic Range)

- Actively controls the gamma compensation in the way it operates the ambient luminance contrast in a certain pixel unit to determine the optimal visibility.

❖ High Sensitivity

- Adopted SONY Super-HAD PS CCD (SCB-3020)/Super-HAD IT CCD (SCB-2020) which enables super sensitive video acquisition.

❖ Low Illumination

- Low illumination feature enabled by the digital signal processing technology that allows recording in a lowest illumination where nearly no light is received.

❖ Superior Backlight Adjustment

- When an object has a bright illumination or sunlight behind it, this camera automatically improves the shaded object picture quality.

❖ Digital Power Synchronization

- The full digital Line Lock function directly adjusts the vertical camera synchronization to enhance the operationability and reliability of this camera.

❖ Random Trigger Function

- Recording video while synchronized to a random trigger signal is available. (This feature is not supported by SCB-2020.)

❖ Output Signal Setting

- You can set the following Video output signals: Image reversion (Horizontal, Vertical, or both), Privacy, Horizontal/Vertical profiling, and digital zooming.

❖ Coaxial Cable Communication

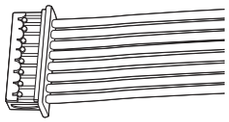
- This is a remote control function that overlaps the coaxial cable (for a transfer of the video signal) with the control signal. In installation or repair, this helps you control the communication controller (optional) without additional cabling.

PRODUCT & ACCESSORIES

❖ Product & Accessories

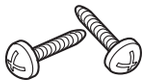
- Main Product

- Accessories



8PIN Connector

Cable Tie (1EA)



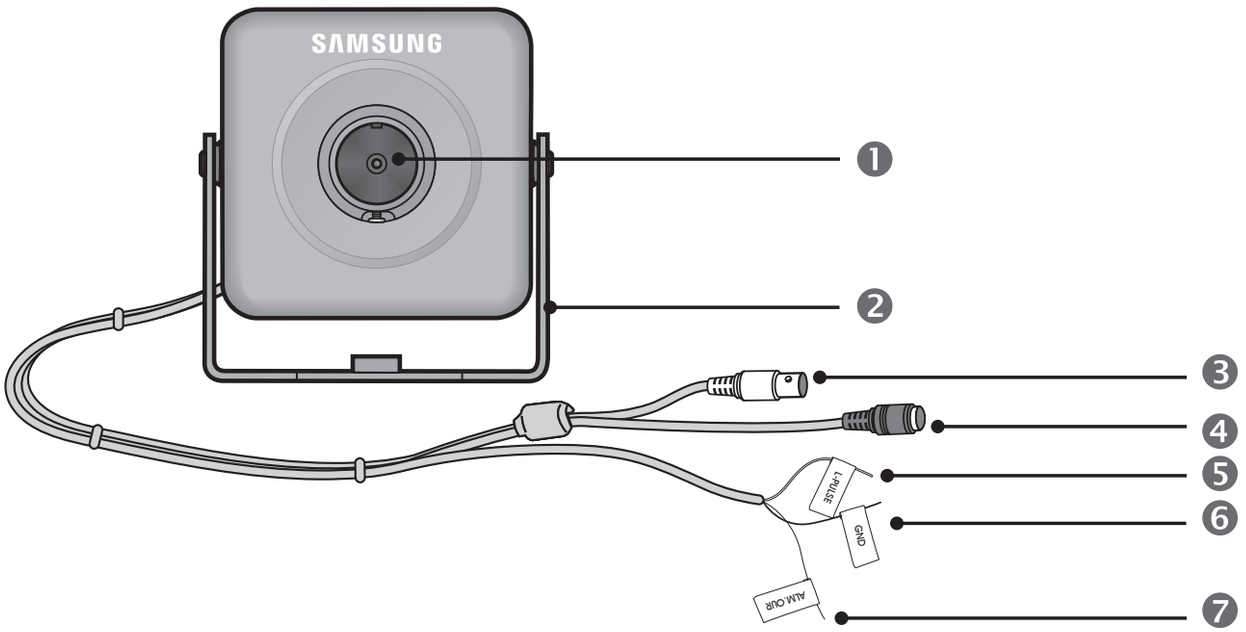
Screw (2EA)

User Manual

Introduction

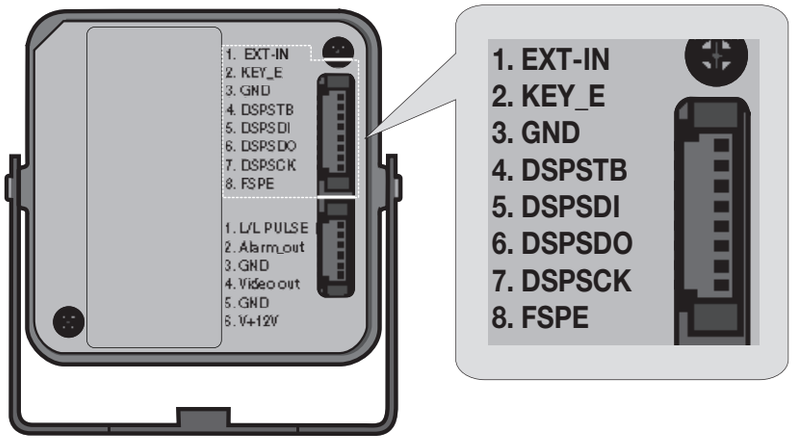
PART NAMES AND FUNCTIONS

❖ Front



❶ **Lens**	3.7mm (F2.0)
❷ **Bracket**	Used to fix the product on a wall or ceiling.
❸ **Video Out**	Outputs camera's video signal, which is to be connected to a monitor's Video In. The port can be used for menu control if connected with a controller.
❹ **Power In**	Power cable is connected to this terminal.
❺ **L/L PULSE**	Clock port for LINE-LOCK control.
❻ **GND**	Grounding port.
❼ **ALM.OUT**	Alarm out port for camera's alarm signal output.

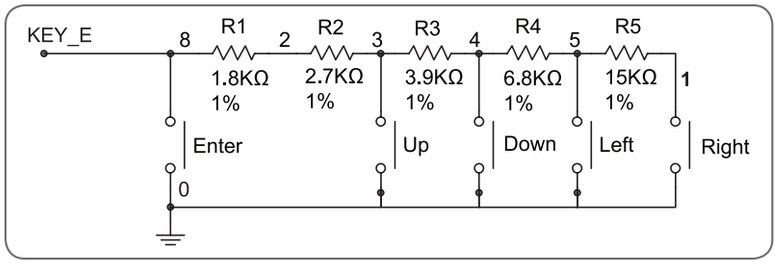
❖ Rear



❶ Port for camera's firmware update. For further details, refer to the below table:

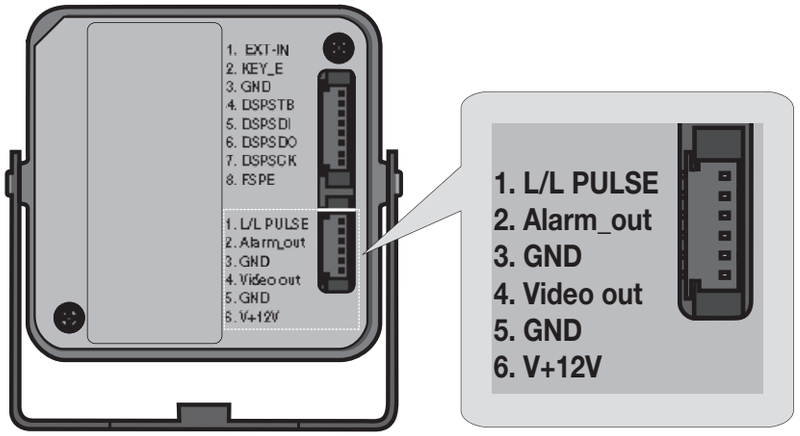
NO	Port Name	Description
1	EXT-IN	Input port for random trigger.
2	KEY-E	Input port for multiplexed analog voltage key.
3	GND	Grounding port for the board.
4	DSPSTB	Selection port for JTAG upgrade chip.
5	DSPSDI	Input port for JTAG upgrade data.
6	DSPSDO	Output port for JTAG upgrade data.
7	DSPSCK	Clock port for JTAG upgrade clock.
8	FSPE	Selection port for JTAG upgrade mode.

※ Sample KET-E port's external connection is shown in the right.



Introduction

❖ Rear

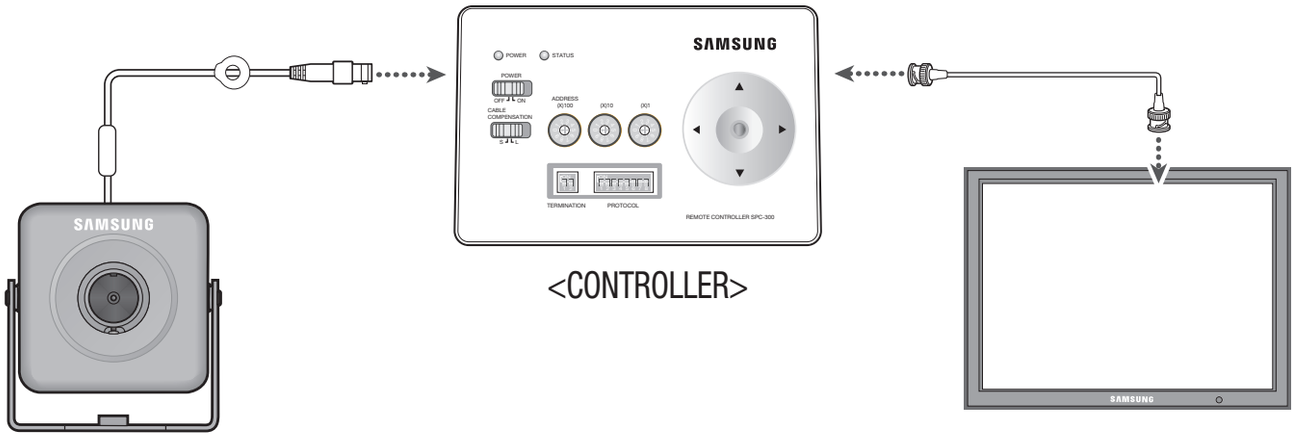


❷ Port for camera's firmware update. For further details, refer to the below table:

NO	Port Name	Description
1	L/L PULSE	Clock port for LINE-LOCK control.
2	Alarm_out	Alarm out port for motion detection.
3	GND	Grounding Port.
4	Video out	This is connected to the Video Input Port of the monitor and it outputs the Video signals.
5	GND	Grounding Port.
6	V+12V	Input port for DC 12 V power.

CONNECTING THE REMOTE CONTROLLER

To control the camera, a remote controller should be connected to.



<CONTROLLER>

1. Connect the camera's video out port to the CONTROLLER's VIDEO IN.
2. Connect the CONTROLLER's VIDEO OUT port to a monitor's video in.

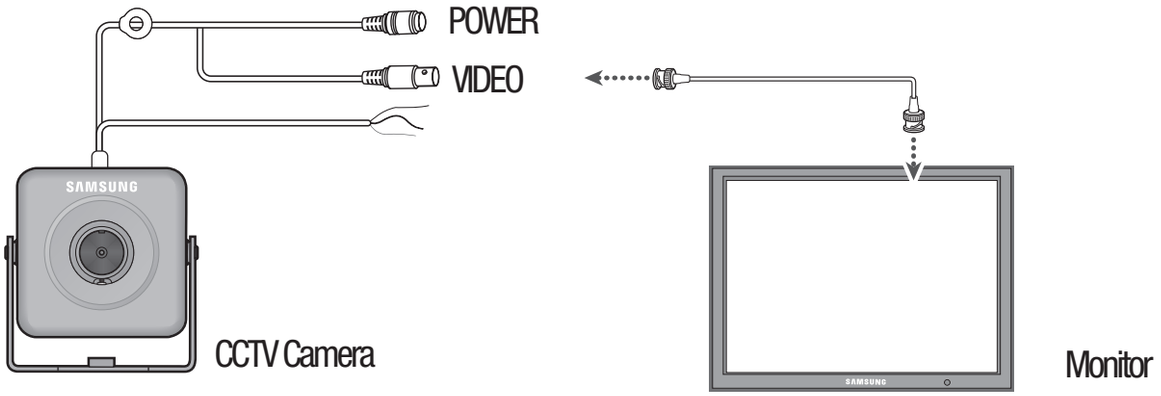
❖ **You can use the menu as following :**

- Press and hold [ENTER]: Moves to the main menu screen.
- Press [ENTER] briefly: Used to confirm the current settings.
- Four Direction Keys: Used to move the cursor up/down or left/right.

Installation

CONNECTING TO MONITOR

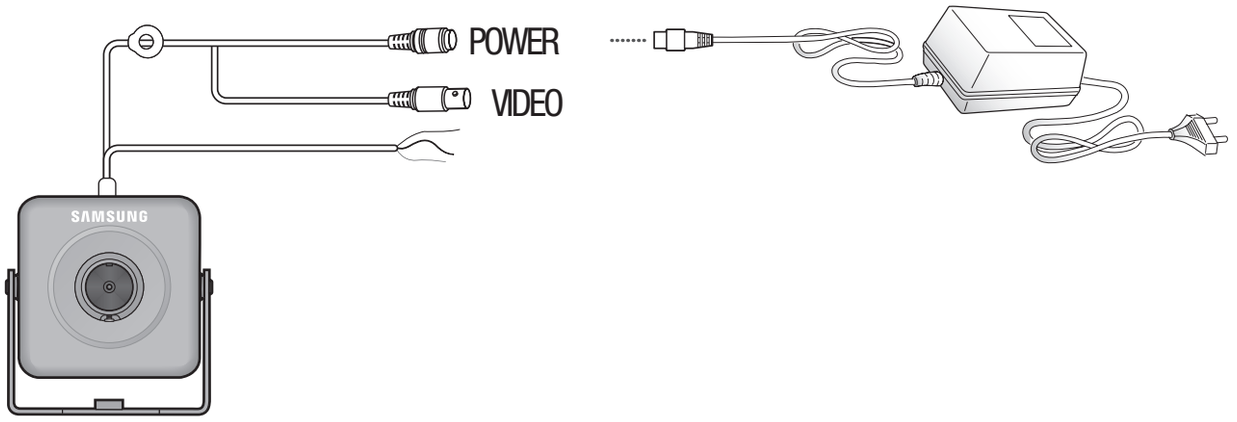
Connect the Video Output jack to the VIDEO-IN jack of monitor.



CONNECTING TO POWER

Connect the adaptor to the power input terminal as shown in the figure below.

The recommended adaptor specification for SCB-3020/SCB-2020 is DC 12V / 500mA.



How to use OSD Menu

USING ICONS IN THE MENU

- ⊠ (EXIT)

  Exits the menu setting.
  Before you exits the menu setting, select **SAVE** to save your settings, or select **QUIT** to cancel.

- ⮌ (RET)

  Returns to the previous menu.

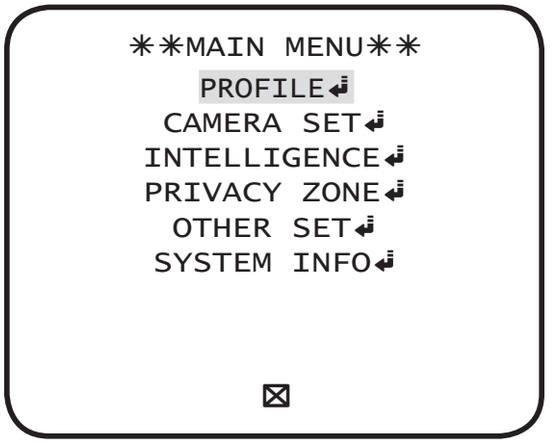
- (SAVE)

  Used to save your settings of **MASK AREA**, **PRIVACY ZONE** and more.
  Once you save your settings, they will remain even if you select **QUIT** in the menu.

- (DEL)

  Used to deletes your settings of **MASK AREA, PRIVACY ZONE** and more.
  Once you delete your settings, they will not be restored even if you select **QUIT** in the menu.

MAIN MENU



- **PROFILE**

  You can set a mode according to the camera installation conditions.

- **CAMERA SET**

  Configure Camera related functions and data.

- **INTELLIGENCE**

  You can configure the settings of motion detection, tracking and more.

- **PRIVACY ZONE**

  You can configure the privacy related settings.

- **OTHER SET**

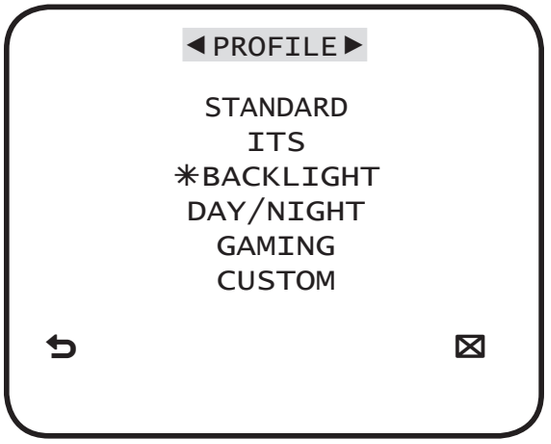
  You can configure for Factory Defaults, and more.

- **SYSTEM INFO.**

  Shows the Camera Version and System Information.

How to use OSD Menu

PROFILE



In the **PROFILE** menu, you can configure the following camera settings at once.

<SCB-3020>

CAMERA SET Menu		STANDARD	ITS	BACKLIGHT	DAY/NIGHT	GAMING
Previous Menu	Sub-menus					
VPS		OFF	ON	OFF	OFF	OFF
IRIS		ELC	ELC	ELC	ELC	ELC
	ELC	-	-	-	-	-
	LEVEL	0	0	0	0	0
	BACKLIGHT	OFF	OFF	WDR	OFF	OFF
	WDR	-	-	-	-	-
	WEIGHT	User setting allowed	User setting allowed	MID	User setting allowed	User setting allowed
	WHITE BAL	User setting allowed	User setting allowed	INDOOR	User setting allowed	User setting allowed
MOTION		(F.FAST)---	(F.FAST)---	F.FAST	(F.FAST)---	SLOW

How to use OSD Menu

CAMERA SET Menu		STANDARD	ITS	BACKLIGHT	DAY/NIGHT	GAMING
Previous Menu	Sub-menus					
DNR		MID	MID	MID	MID	MID
SHUTTER		(OFF)---	(OFF)---	(OFF)---	(OFF)---	(OFF)---
SENS-UP		AUTOx2	AUTOx2	AUTOx2	AUTOx4	AUTOx4
XDR		MID	MID	MID	MID	MID
DAY/NIGHT		AUTO	AUTO	DAY	AUTO	DAY
	NIGHT	-	-	-	-	-
	BURST	OFF	ON	OFF	OFF	OFF
WHITE BAL		DAY	DAY/NIGHT	DAY	DAY/NIGHT	DAY
	DAY	-	-	-	-	-
	MODE	ATW2	ATW1	ATW2	ATW1	ATW1
	RED	0	0	0	0	0
	BLUE	0	0	0	0	0
	NIGHT	-	-	-	-	-
	BRIGHTNESS	User setting allowed	MID	User setting allowed	MID	User setting allowed
	MODE	OFF	ATW2	OFF	ATW2	OFF
	RED	User setting allowed	0	User setting allowed	0	User setting allowed
	BLUE	User setting allowed	0	User setting allowed	0	User setting allowed
DETAIL		2	2	2	2	2

How to use OSD Menu

<SCB-2020>

CAMERA SET Menu		STANDARD	ITS	BACKLIGHT	DAY/NIGHT	GAMING
Previous Menu	Sub-menus					
IRIS		ELC	ELC	ELC	ELC	ELC
	ELC	-	-	-	-	-
	LEVEL	0	0	0	0	0
	BACKLIGHT	OFF	OFF	BLC	OFF	OFF
MOTION		(F.FAST)---	(F.FAST)---	F.FAST	(F.FAST)---	SLOW
DNR		MID	MID	MID	MID	MID
SHUTTER		(OFF)---	(OFF)---	(OFF)---	(OFF)---	(OFF)---
SENS-UP		AUTOx2	AUTOx2	AUTOx2	AUTOx4	AUTOx4
XDR		MID	MID	MID	MID	MID
DAY/NIGHT		AUTO	AUTO	DAY	AUTO	DAY
	NIGHT	-	-	-	-	-
	BURST	OFF	ON	OFF	OFF	OFF
WHITE BAL		DAY	DAY/NIGHT	DAY	DAY/NIGHT	DAY
	DAY	-	-	-	-	-
	MODE	ATW2	ATW1	ATW2	ATW1	ATW1
	RED	0	0	0	0	0
	BLUE	0	0	0	0	0

CAMERA SET Menu		STANDARD	ITS	BACKLIGHT	DAY/NIGHT	GAMING
Previous Menu	Sub-menus					
WHITE BAL	NIGHT	-	-	-	-	-
	BRIGHTNESS	User setting allowed	MID	User setting allowed	MID	User setting allowed
	MODE	OFF	ATW2	OFF	ATW2	OFF
	RED	User setting allowed	0	User setting allowed	0	User setting allowed
	BLUE	User setting allowed	0	User setting allowed	0	User setting allowed
DETAIL		2	2	2	2	2

❖ ITS

It will be set automatically so you can easily check the traffic conditions.

❖ BACKLIGHT

It will be set automatically so you can distinguish the object from the background in a severe backlighting scene.

❖ DAY/NIGHT

It will be set automatically so it optimizes to the day or night conditions, respectively.

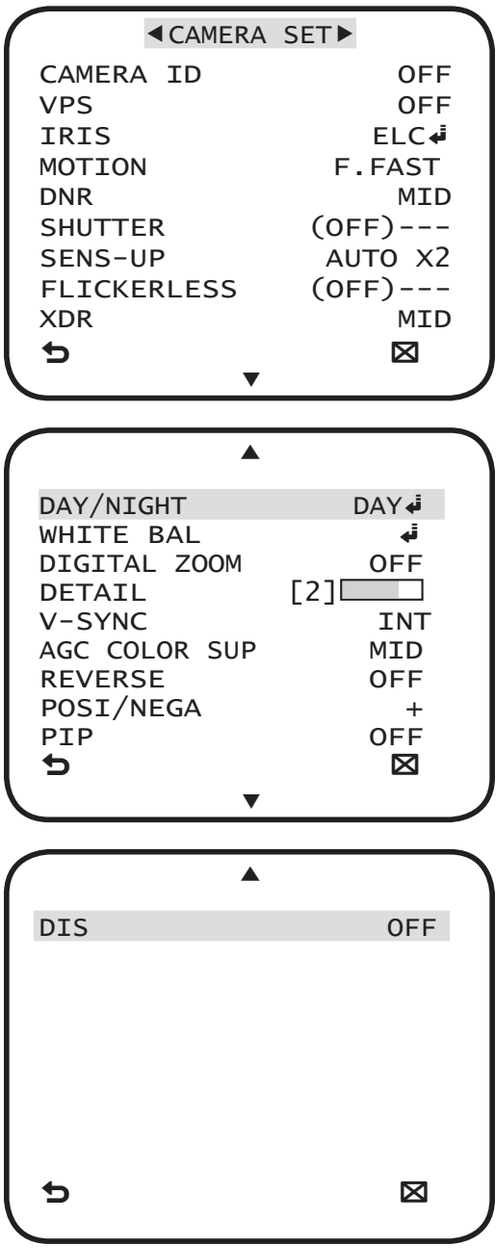
❖ GAMING

It will be set automatically to help you take a picture in a regular indoor lighting condition.

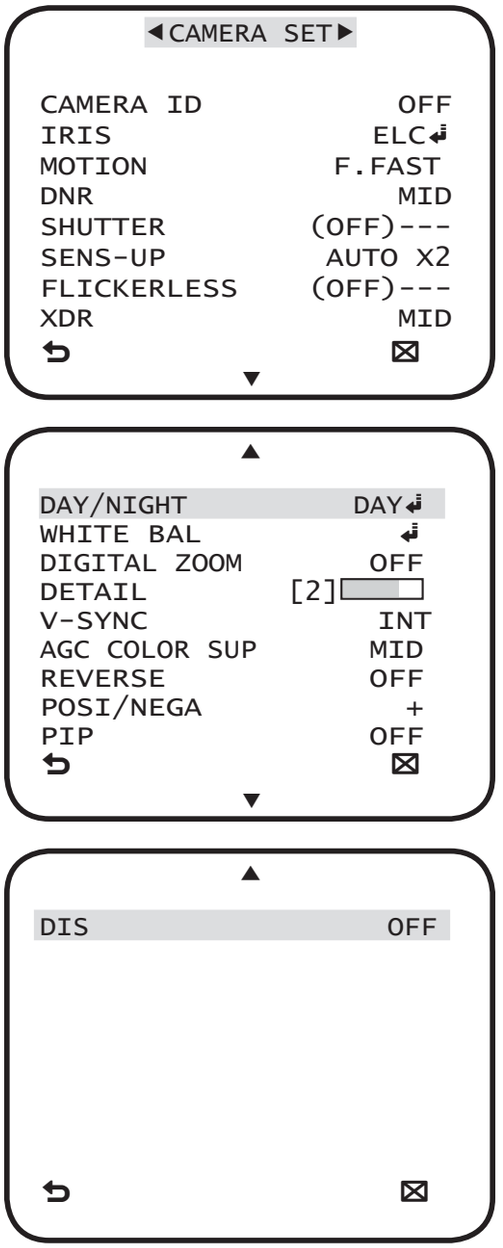
How to use OSD Menu

CAMERA SETUP

<SCB-3020>



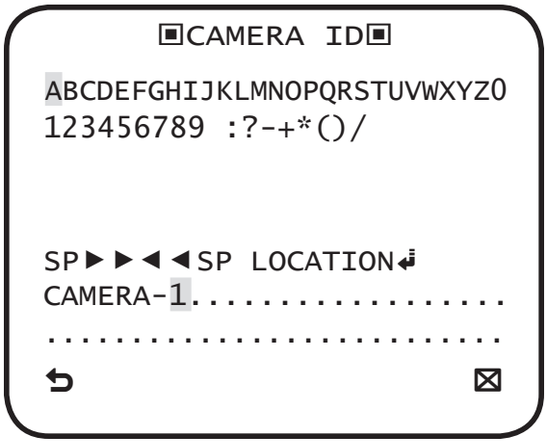
<SCB-2020>



Setup the general functions of zoom camera module.

Use the ▲▼◀▶ switch to select a menu item.

❖ CAMERA ID [OFF, ON]



The **CAMERA ID** menu is used for you to assign a unique name to a camera. If you press the **SETUP** switch with the **CAMERA ID** menu selected, you will see the appropriate screen.

You can enter up to 54 alphanumeric or special characters for the **CAMERA ID**. Select **LOCATION** and press the **SETUP** switch to move the display position of the **CAMERA ID**.

❖ VPS [OFF, ON]

If you set the VPS (Virtual Progressive Scan) option, the camera will display the image in progressive format.

■ Note :

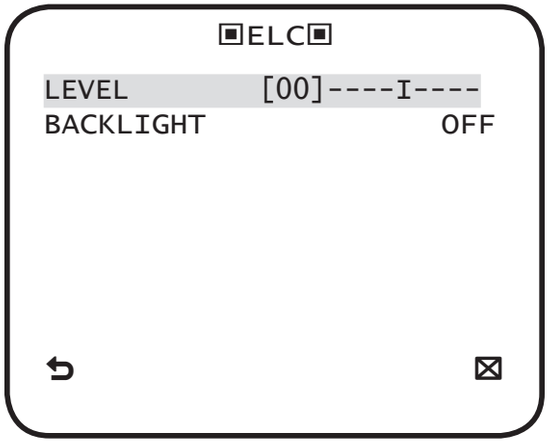
– For SCB-2020, the VPS option is not available.

❖ IRIS [ELC]

The IRIS menu is used if you want to adjust the intensity of radiation incoming to the camera.

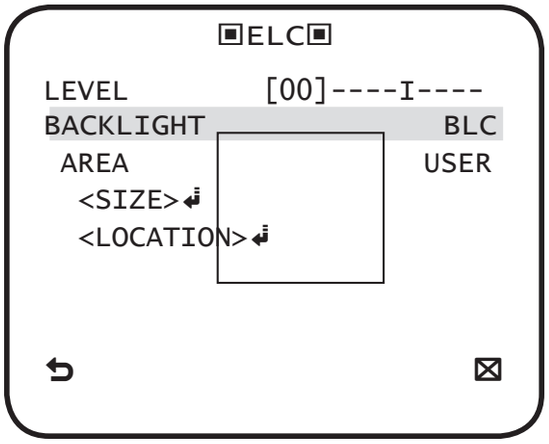
- **ELC (Electronic Light Control)**

① If you press the **SETUP** switch when the **ELC↵** submenu is selected, the corresponding screen appears. You can make the **ELC** (Electronic Light Control) function active or not.
LEVEL allows you to adjust the overall brightness; the closer to "+" the level is, the brighter it gets while the closer to "-" the level is, the darker it gets.

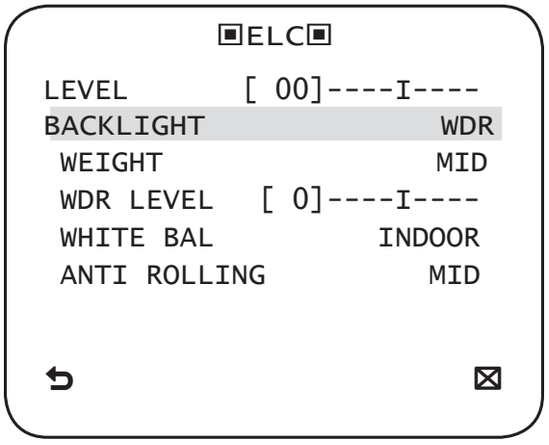


② If you set **BACKLIGHT** to **BLC**, you will see a menu where you can specify the backlight compensation area. Specify the backlight compensation area by defining the area size and location.
If you use an ordinary camera to record a backlighted scene, the object will be displayed dark on the monitor. To solve this problem, use the backlight compensation function. With this, you can view a sharp video image even in a bright lighting.

How to use OSD Menu



③ If you set the **BACKLIGHT** option to **WDR**, you will see a menu where you can set the WDR options.
Specify the composition level in the WEIGHT menu.
You can also select any of **OUTDOOR**, and **INDOOR** in **WHITE BAL**.
For **ANTI ROLLING**, select an option to reduce the COLOR ROLLING effect.



WDR(Wide Dynamic Range) extends the gain range of the screen that is mostly useful if you take a simultaneous picture of both indoor and outside of the window.
Namely, it improves the sharpness of the picture in outdoor scenery as well as indoor.

■ Note :

– If you use the VPS (Virtual Progressive Scan) function, the CCD reads differently so you can not use WDR simultaneously. If you set VPS to ON, WDR will be automatically set to OFF.

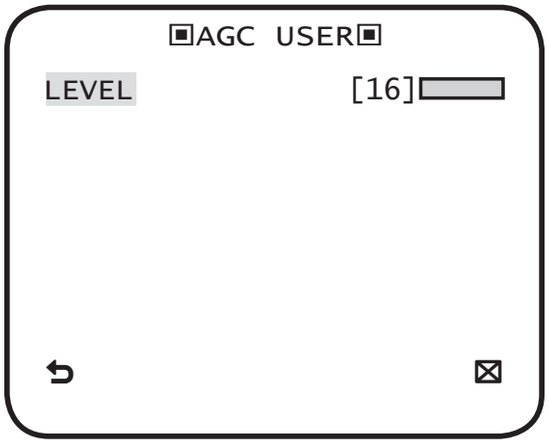
– For SCB-2020, the WDR mode is not available.

❖ AGC [OFF, VERY LOW, LOW, MID, HIGH, VERY HIGH, USER, FIX]

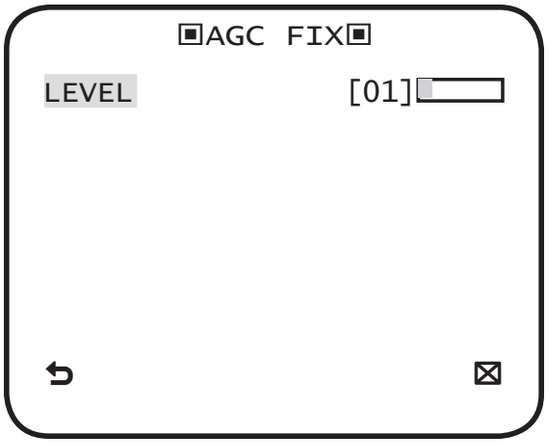
The **AGC** (Auto Gain Control) menu is used to set the **AGC** level of the camera. When the **AGC** is active, the camera automatically increases the sensitivity by amplifying the Video signal when the strength of the signal falls below the normal value.

If **OFF** or **FIX** mode is selected in the **SENS-UP** menu, you can specify the **AGC** level.

If you press the **SETUP** switch with a **USER** sub menu selected, you will see the appropriate screen.



In **USER** mode, you can break down the level in 16 steps from **VERY LOW** to **VERY HIGH** to your preference.



If you press the **SETUP** switch with a **FIX** sub menu selected, you will see the appropriate screen.

As a fixed value of the **AGC** gain is used in **FIX** mode, you can select one of the 16 detailed levels from **VERY LOW** to **VERY HIGH** before fixing it.

- Note :
  - If the DAY/NIGHT menu of the CAMERA SET is set to AUTO, the AGC menu will be deactivated.
  - If FLICKERLESS is set to ON, the AGC FIX mode will be disabled.

❖ MOTION [S.SLOW, SLOW, NORM, FAST, F.FAST]

The **MOTION** menu is used to adjust the strength of the **AGC** level for a control of the camera motion. This is available only if the **SENS-UP** menu is set to **AUTO**.
You can select one from **S.SLOW**, **SLOW**, **NORM**, **FAST** and **F.FAST** for the **AGC** level.

If you monitor a fast moving object in a low contrast scene, select **F.FAST** while select **S.SLOW** for a hardly moving object in the same lighting condition.

- Note :
  - If the DAY/NIGHT menu of the CAMERA SET is set to AUTO, the MOTION menu will be deactivated.

❖ DNR [OFF,LOW,MID,HIGH, USER(1~16)]

You can configure the **DNR** (Digital Noise Reduction) related settings.

Reduces the noise on the screen.
This is especially useful for a severely distorted screen.

You can set the level if you set **DNR** to **USER**.

❖ SHUTTER

This feature is not supported.

❖ SENS-UP

[OFF, AUTO X2, AUTO X4, AUTO X6, AUTO X8, AUTO X12, AUTO X16, AUTO X24, AUTO X32, AUTO X48, AUTO X64, AUTO X96, AUTO X128, AUTO X256, AUTO X512]

For brighter and clear video output, it automatically extends capturing exposure under low illumination circumstances such as night or insufficient lighting.

❖ FLICKERLESS

This feature is not supported.

How to use OSD Menu

❖ **XDR (eXtended Dynamic Range)**
[OFF, LOW, MID, HIGH]

Actively controls the gamma compensation in the way it operates the ambient luminance contrast in a certain pixel unit to determine the optimal visibility.

Select one from **OFF**, **LOW**, **MID** and **HIGH**. Closing to **HIGH** will increase the compensation level.

❖ **DAY/NIGHT** **[DAY,NIGHT,AUTO]**

• **DAY**

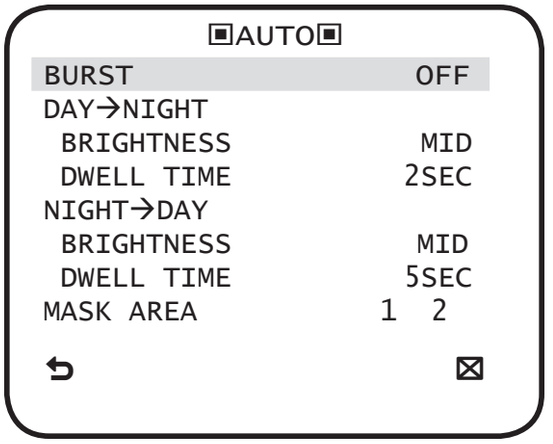
If set to **DAY**, it will be fixed to **DAY** mode regardless of the ambient conditions.

• **NIGHT**

If set to **NIGHT**, it will be fixed to Black-and-White mode regardless of the ambient conditions.
If you press the **SETUP** switch with a **NIGHT** sub menu selected, you will see a menu where you can set Burst to **OFF/ON**.
If **BURST** is set to **ON**, the Burst signal will output together with the black-and-white composite video signal. If **BURST** is set to **OFF**, the Burst signal does not output.
You can set the **BURST** option to **OFF/ON**, or select to output the Burst signal in **NIGHT** mode.

• **AUTO**

The camera will automatically switch between **DAY** and **NIGHT** mode, according to the lighting condition.
If you press the **SETUP** switch with an **AUTO**-based sub menu selected, you will see the appropriate screen.



You can set the **BURST** option to **OFF/ON**, or select to output the Burst signal in **NIGHT** mode.
Brightness of **DAY→NIGHT** sets the criterion for switching color (C) to black&white (BW), selectable from **LOW, MEDIUM** and **HIGH**. The lower the setting (HIGH → LOW) is, the darker condition the switching will be.

The **DWELL TIME** of **DAY→NIGHT** is the criterion of switching requirement.

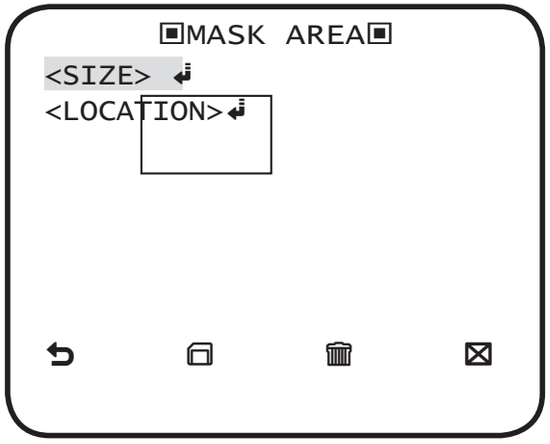
Brightness of **NIGHT → DAY** sets the criterion for switching black&white (BW) to color (C), selectable from **LOW, MEDIUM** and **HIGH**. The lower the setting (HIGH → LOW) is, the darker condition the switching will be.

The **DWELL TIME** of **NIGHT → DAY** is the criterion of switching requirement.

The **MASK AREA** menu is provided for preventing switching failure or error which may be caused by bright spot lighting source at night.

The **MASK** menu is used to prevent a filter switch error or inability of determining the switch in existence of a high spot light source at night.

If you press the **SETUP** switch in item 1 or 2 of the **MASK** menu, you will see a menu where you can specify an area to mask.



You can specify Mask 1 and 2 simultaneously.
The mask is used only for determining the switch and any excessive bright area at night will be masked.

■ Note :

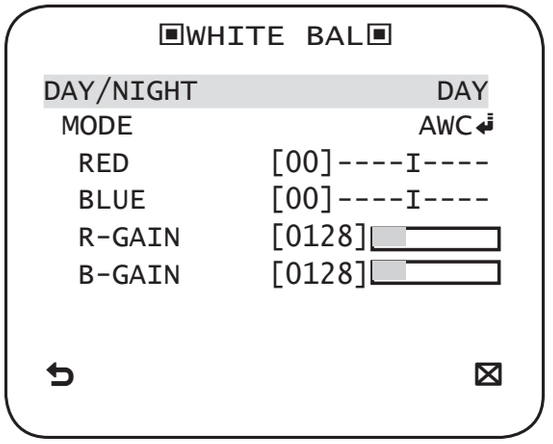
– If BACKLIGHT is set to BLC, the MASK AREA function will be deactivated.

❖ WHITE BAL [DAY/NIGHT]

If you want to adjust the color scheme, use the **WHITE BALANCE** function.

• **DAY**

In **DAY** mode, you can set the color values of **RED** and **BLUE**. The screen will be displayed in colors according to your settings.



■ Note :

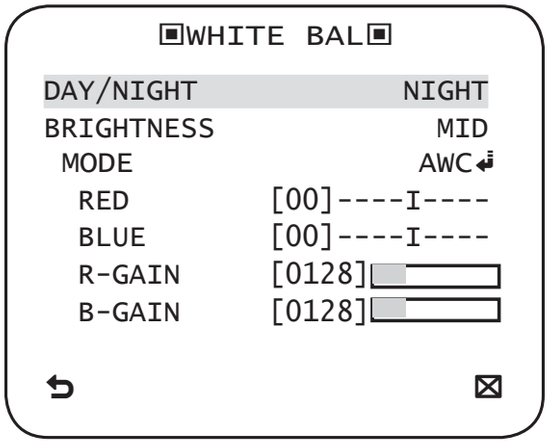
– You can set the values of R-GAIN and B-GAIN only in AWC mode.

• **NIGHT**

Use the **NIGHT** mode if you want to set the white balance differently according to the ambient luminance.

If the **NIGHT** mode is set to **OFF**, the white balance will always operate as set in **DAY** mode; if not to **OFF**, the camera will switch to as set in **DAY/NIGHT** mode according to the brightness.

In **NIGHT** mode, you can set the values of **RED**, **BLUE** and **BRIGHTNESS**. The screen will be displayed in colors according to your settings.



How to use OSD Menu

■ Note :

– You can set the values of R-GAIN and B-GAIN only in AWC mode.

– If AGC is set to OFF or FIX, you can not access the NIGHT menu.

– **For adjusting the white balance, the following 5 modes are provided:**

• **ATW1**(Auto Tracing White Balance mode 1): The camera can automatically adjust the color temperature in real time, according to the ambient conditions. The color temperature ranges from approx. 2500K to 9300K.

• **ATW2**: The color temperature ranges from approx. 2,000K to 10,000K.

• **AWC** (Auto White Balance Control): If you press the **SETUP** switch in the appropriate item position, Auto White Balance will perform once.

• 3200K : Set color temperature to 3200K

• 5600K : Set color temperature to 5600K

– **RED :** Adjusts the strength of the red color.

– **BLUE :** Adjusts the strength of the blue color.

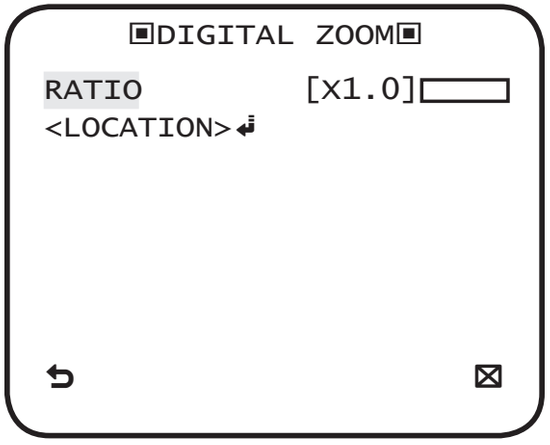
– **R-GAIN/B-GAIN :** Enables you to set the current color temperature manually.

– **BRIGHTNESS** : Select a brightness level in switching from setting in DAY mode to setting in NIGHT mode.

❖ **DIGITAL ZOOM** **[ON/OFF]**

You can set the digital zoom factor and position. If you press the **SETUP** switch with the **DIGITAL ZOOM** function set to **ON**, you will see the appropriate screen.

When the zoom factor and position are defined, the digital zoom function will operate.



- **LOCATION** : If you press the **SETUP** switch in the condition where the image is enlarged as much as the ratio setting, you can watch an invisible area of the effective screen as well using the ▲▼◀▶ switch.

■ Note :

– If the digital zoom factor is set to larger than 1x, the FENCE function will be deactivated.

– The DIGITAL ZOOM function enlarges the pixel itself, which can cause deterioration of the quality.

❖ **DETAIL** **[0~3]**

Controls the horizontal or vertical distinction.

❖ **V-SYNC** **[INT, LINE]**

Select the vertical sync mode for **INT** or **LINE**.

If you select **INT**, the camera will use the internal synchronization.

If selecting **LINE**, the camera will use the external power source frequency for the synchronization.

You can adjust the **LL-PHASE**.

■ Note :

– To use the LINE LOCK sync mode, L/L pulse input should be applied before turning on the camera so that the LINE LOCK menu can be selected.
When using LINE LOCK, make sure to input L/L pulse.

– If L/L pulse input is interrupted while operating the camera in LINE LOCK sync mode, it may cause shaking display or VPS (Virtual Progressive Scan) function.

– When operating in Line Lock mode, it switches to INT mode internally if the L-pulse disappears.
Such switching may not be immediately reflected to menu settings displayed, and it will be refreshed when the page is updated.

– In V-SYNC mode, video output may appear erroneous if there is no L/L PULSE input.

– In V-SYNC mode, you must enter L/L-PULSE; furthermore, GND connection should be made for the device.

❖ **AGC COLOR SUP** **[LOW , MID, HIGH]**

Adjust the color scheme according to the **AGC** value.

❖ **REVERSE** **[OFF, H, V, H/V]**

Mirrors video signals horizontally, vertically, or both.

❖ **POSI/NEGA** **[+, -]**

Output as it is or mirror the video brightness signal.

❖ **PIP** **[OFF, ON]**

Displays a sub image together with the main image on the same screen using the Picture In Picture function.

■ Note :

– If more than one privacy zone is set and the PRIVACY SET is set to ON, the PIP function will be deactivated.

– If the INTELLIGENCE function is set to FENCE mode, the PIP menu will be deactivated.

❖ **DIS** **[OFF, ON]**

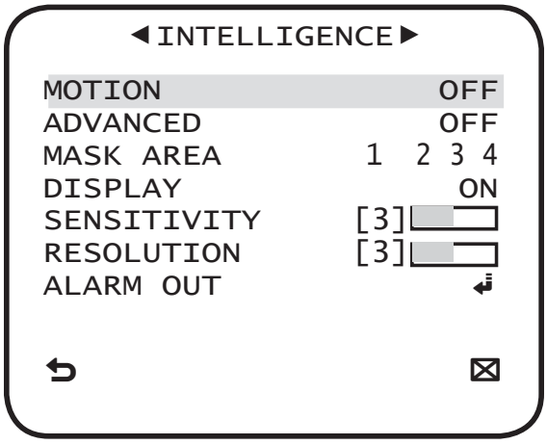
Digital Image Stabilization will set the anti-shake compensation.

■ Note :

– If you set DIS to ON, the compensation area will be enlarged as set in the digital zoom factor.
If you set the digital zoom factor to greater than the enlarged zoom factor for the compensation, the DIS function will be deactivated.

How to use OSD Menu

INTELLIGENCE



You can set the motion detection and tracking in the **INTELLIGENCE** menu.

❖ **MOTION** **[OFF,TRACKING,DETECTION]**

- **TRACKING**

  Detects and tracks a moving object.

- **DETECTION**

  Detects a moving object.

■ Note :

– If it is set to DETECTION, you can not set such functions as FIXED/MOVED and FENCE in the ADVANCED menu.

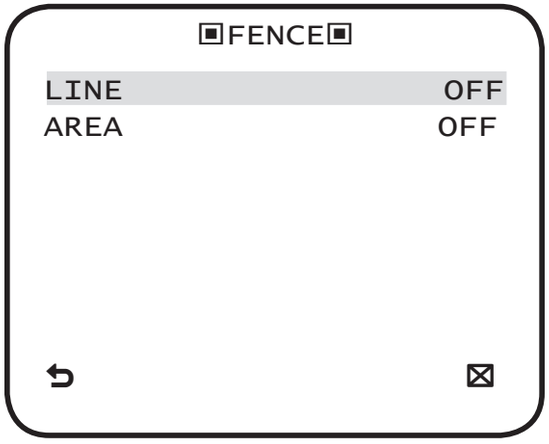
❖ **ADVANCED** **[OFF, FIXED/MOVED, FENCE]**

Detects a motion of an object and displays an image of any moving object before tracking the moving route.

- **FENCE**

  This is to detect if a moving object passes through the specified LINE or AREA.

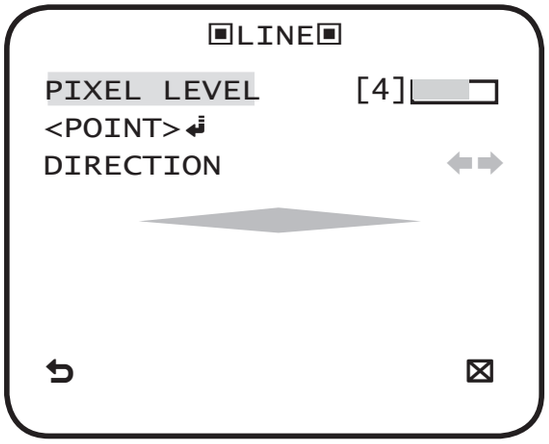
  In a condition where a moving object is detected in an analysis of the previous and current frames whose movement overlaps a certain area, the system displays “PASS” if the object’s center line passes through the line while it displays “ENTER” or “EXIT” if the center point passes through the area.



You can set the position and detection direction of the LINE, and the size and position of the AREA.

How to use OSD Menu

- How to set the line



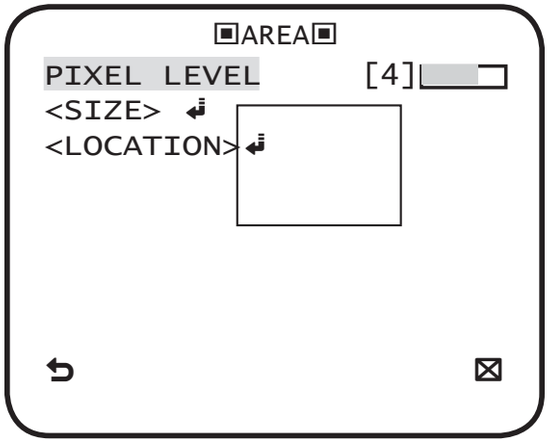
① If you press the **SETUP** switch with the **LINE** option set to **ON**, you can specify the position and detection direction of the line.

② If you change the **PIXEL LEVEL** for setting the position, specify the pixel that moves by a single pressure of the ▲▼◀▶ switch.

③ In **<POINT>**, you can specify the first position of the line by pressing the **SETUP** switch once, and the second position by pressing the switch again. Use the ▲▼◀▶ switch to specify the position. Set each position of the two points and press the **SETUP** switch to complete the positioning.

④ If you change the **DIRECTION**, you can specify the detection direction. The detection direction based on the defined two points will be displayed on the screen.

- How to set the area



① If you press the **SETUP** switch with the **AREA** option set to **ON**, you can specify the position and size of the area.

② If you change the **PIXEL LEVEL** for setting the position, specify the pixel that moves by a single pressure of the ▲▼◀▶ switch.

③ In **<SIZE>**, press the **SETUP** switch and use the ▲▼◀▶ switch to adjust the size.
Press the **SETUP** switch again to complete the sizing.

④ In **<LOCATION>**, press the **SETUP** switch and use the ▲▼◀▶ switch to specify the position.
Press the **SETUP** switch again to complete the positioning.

How to use OSD Menu

■ Note :

– If you set the LINE of the FENCE to ON, PRIVACY 12 will not be available.
Functions of FENCE, PIP, DIS and DIGITAL ZOOM (if the digital zoom factor is set to larger than 1x) can not be used simultaneously.

– In the boundary of the defined AREA and LINE, a FENCE detection error may occur if two or more moving objects overlap with each other or one object separates in multiple directions.

• **FIXED/MOVED**

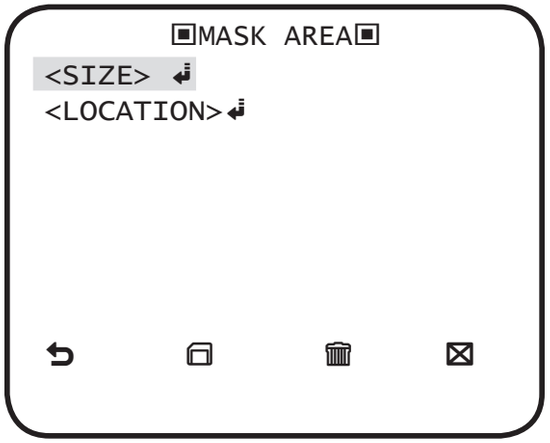
If an object on the screen suddenly disappears or an object comes out of nowhere and stays for a certain time, the area will be displayed.

A detection (FIXED/MOVED) error may occur if :

- multiple motions occur continuously in random directions
- a fixed object moves in one position continuously
- a second object screens the first moving object

❖ **MASK AREA [1~4]**

Specify a detection exception area to mask.
Select a mask number and specify the size and position.



❖ **DISPLAY** [ON, OFF]

With the DISPLAY option set to ON, a motion or a set ADVANCED function will be displayed on the screen, if detected.

❖ **SENSITIVITY** [1~7]

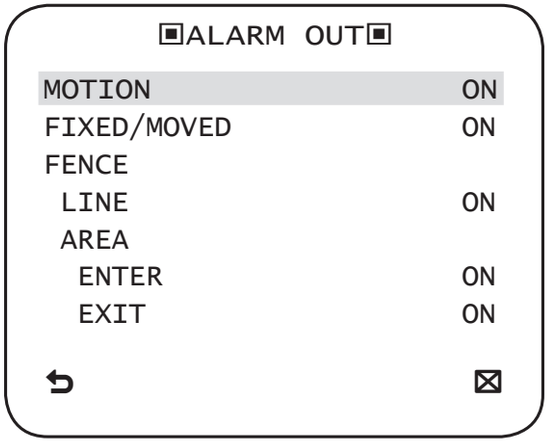
Set the sensitivity of the motion detection.

❖ **RESOLUTION** [1~5]

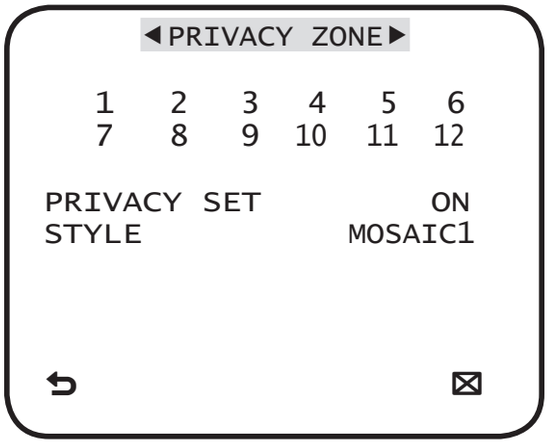
If setting it to high, the camera can detect even a trivial movement of the target.

❖ ALARM OUT

If you set a desired menu item to ON, the camera will sound an alert if it detect the appropriate motion.



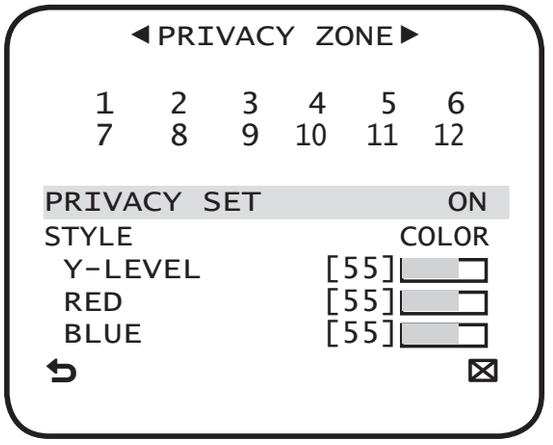
PRIVACY ZONE SETUP



The **PRIVACY** function will protect your privacy by screening the privacy area that you have specified during monitoring. You can specify up to 12 privacy zones.

If you set the **PRIVACY SET** to **ON**, your **PRIVACY ZONE** settings will be applied.

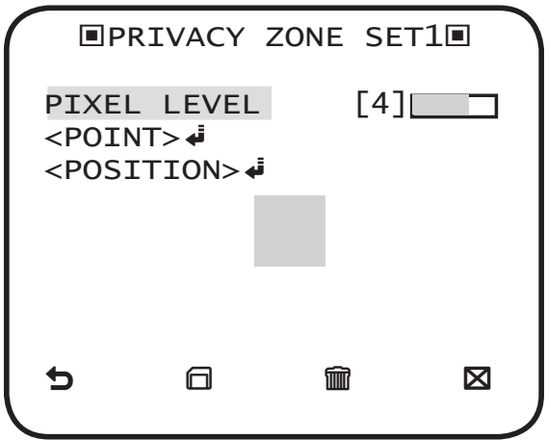
You can change the style to adjust the mosaic size and color of the **PRIVACY ZONE**.



How to use OSD Menu

Use the ▲ ▼ ◀ ▶ switch to select one from PRIVACY 1 through 12.

Select one from PRIVACY 1~12 and press the SETUP switch to confirm your setting. You can specify a pixel that moves as you change the **PIXEL LEVEL** to set the position.



- How to set the point

  You can set each position of the 4 points.

  ① If you press the **SETUP** switch in **<POINT>**, you will see the points available in the **PRIVACY ZONE**. Each time you press the **SETUP** switch, the points available will move.

  ② Use the ▲ ▼ ◀ ▶ switch to set the position of each point. Set each position of the four points and press the **SETUP** switch to complete the positioning.

- How to set the position

  You can move the position of the overall area.

  ① By pressing the **SETUP** switch in **<POSITION>**, you can move the overall position of the privacy zone.

  ② Use the ▲ ▼ ◀ ▶ switch to move the position and press the **SETUP** switch to confirm it.

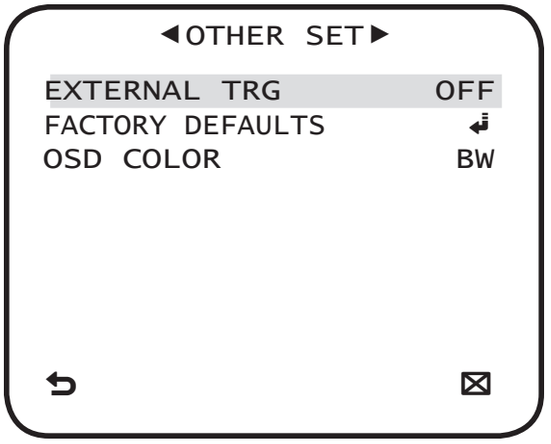
■ Note :

– If more than one PRIVACY ZONE is specified and the PRIVACY SET is set to ON, the PIP function will be deactivated.

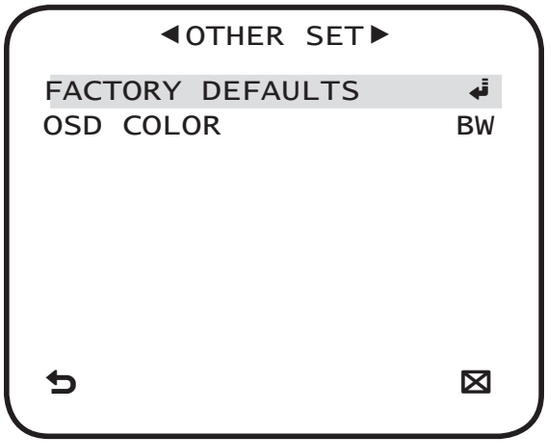
– If the 12th PRIVACY ZONE is specified, the LINE function of FENCE will be deactivated.

OTHER SET

<SCB-3020>

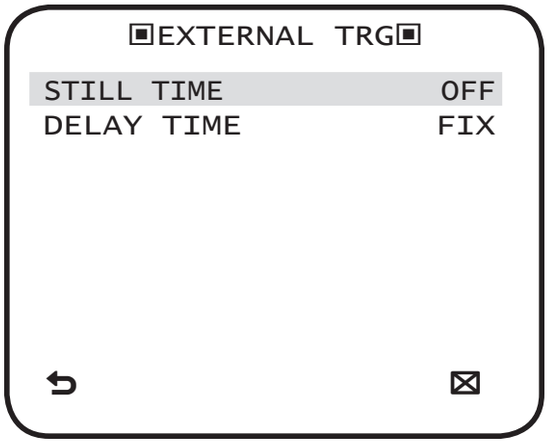


<SCB-2020>



❖ EXTERNAL TRG

Set the **EXTERNAL TRG** menu to **ON** and press the **SETUP** switch to display the appropriate screen.



You can set the **STILL TIME** to 1~4 seconds.

If **DELAY TIME** is set to **FIX**, the **DELAY TIME** will be set in sync with the **STILL TIME** if set to **USER**, the **DELAY TIME** will be set to your setting.

■ Note :

– If VPS is set to OFF, the EXTERNAL TRG menu will be deactivated.

– If the external signal is received when the lighting control is not stable, this may cause an error.

– SCB-2020, the VPS and WDR mode are not available.

❖ FACTORY DEFAULTS

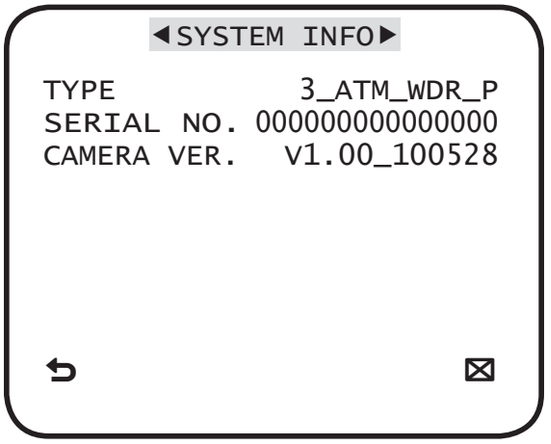
All the settings will be restored to the factory default.

❖ OSD COLOR [BW, R/G/B]

You can set the OSD(On-screen Display) color to COLOR or B/W.

How to use OSD Menu

SYSTEM INFORMATION



You can view the system information including the serial number and camera version.

❖ Initial Configuration Table

• Camera Configuration	
CAMERA ID	OFF
VPS	OFF
IRIS	ELC
AGC	VERY HIGH
MOTION	F.FAST
DNR	MID
SHUTTER	(OFF)
SENS-UP	AUTO x2
FLICKERLESS	(OFF)
XDR	MID
DAY/NIGHT	DAY
DIGITAL ZOOM	OFF
DETAIL	[2]
AGC COLOR SUP	MID
REVERSE	OFF
POSI/NEGA	+
PIP	OFF
DIS	OFF
V-SYNC	INT

※ VPS is only available with SCB-3020.

SPECIFICATIONS

Items	SCB-3020N	SCB-3020P	SCB-2020N	SCB-2020P
POWER				
Input Voltage/Current	12V DC			
Power Consumption	Max. 2.0W		Max. 1.6W	
Video				
Imaging Device	1/3” Double Scan CCD		1/3” Super HAD CCD	
Total Pixels	811(H) x 508(V)	795(H) x 596(V)	811(H) x 508(V)	795(H) x 596(V)
Effective Pixels	768(H) x 494(V)	752(H) x 582(V)	768(H) x 494(V)	752(H) x 582(V)
Scanning System	2 : 1 Interlace			
Synchronization	Internal/Line lock (L-Pulse input)			
Frequency	H : 15.734KHz / V : 59.94Hz	H : 15.625KHz / V : 50Hz	H : 15.734KHz / V : 59.94Hz	H : 15.625KHz / V : 50Hz
Horizontal Resolution	Color : 600 TV Lines			
Min. Illumination	Color : 0.45 Lux (50IRE@F2.0, Sens-up 2x)		Color : 0.15 Lux (50IRE@F2.0, Sens-up 2x)	
S / N (Y signal)	52dB (AGC off, Weight on)			
Video Output	CVBS : 1.0 Vp-p / 75Ω composite			
Lens Type				
Focal Length (Zoom Ratio)	3.7mm			
Max. Aperture Ratio	F2.0			
Angular Field of View	D : 80.81°, H : 64.65°, V : 48.49 °			
Min. Object Distance	0.4m			

Specifications

Items	SCB-3020N	SCB-3020P	SCB-2020N	SCB-2020P
Operational				
On Screen Display	Multi-language Support English, Japanese, Spanish, French, Portuguese, Taiwanese, Korean	Multi-language Support English, French, German, Spanish, Italian, Chinese, Russian, Polish, Czech, Romanian, Serbian, Swedish, Danish, Turkish, Portuguese	Multi-language Support English, Japanese, Spanish, French, Portuguese, Taiwanese, Korean	Multi-language Support English, French, German, Spanish, Italian, Chinese, Russian, Polish, Czech, Romanian, Serbian, Swedish, Danish, Turkish, Portuguese
Camera Title	Off / On (Displayed 54 characters)			
Day & Night	DAY/NIGHT/AUTO			
Backlight Compensation	Off/BLC/WDR		Off/BLC	
Wide Dynamic Range	128x(52dB)	160x(54dB)	-	
XDR	Off/Low/Mid/High			
Digital Noise Reduction (2D+3D)	Off/Low/Mid/High/User			
Digital Image Stabilization	Off/On			
Motion Detection	Off / Tracking / Detection			
Privacy Function	Off/On (12 Areas, Polygonal Type)			
Sens-up (Frame Integration)	Off/Auto (Selectable x2 ~ x512)			
Gain Control	Off/Very Low/Low/Mid/High/Very High/User/FIX			
White Balance	ATW1/ ATW2/AWC(Manual)/3200°K/5600°K			

Specifications

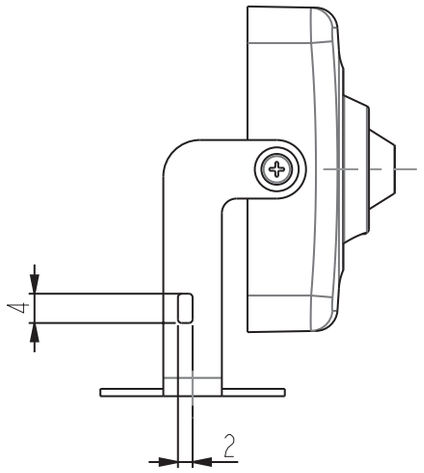
Items	SCB-3020N	SCB-3020P	SCB-2020N	SCB-2020P
Electronic Shutter Speed	1/60 ~ 1/200,000	1/50 ~ 1/200,000	1/60 ~ 1/200,000	1/50 ~ 1/200,000
Digital Zoom	Off/On (1x ~ 16x)			
Flip / Mirror	Off/H/V/(H/V)			
Profile	Standard / ITS / Backllight / Day & Night / Gaming / Custom			
VPS	SCB-3020N,SCB-3020P : OFF/ON SCB-2020N,SCB-2020P : -			
Intelligent Video	(Fixed / Moved), Fence(Line, Area)			
PIP	Off / On			
Alarm	1 Output			
Communication	Coaxial Control by SPC-300 (Option)			
ENVIRONMENTAL				
Operating Temperature / Humidity	-10°C ~ +50°C (+14°F ~ +122°F) / Less than 90% RH			
MECHANICAL				
Color / Material	Body : Black,			
Dimension (WxHxD)	53.3 x 40.2 x 50.2 mm			
Weight	105g			

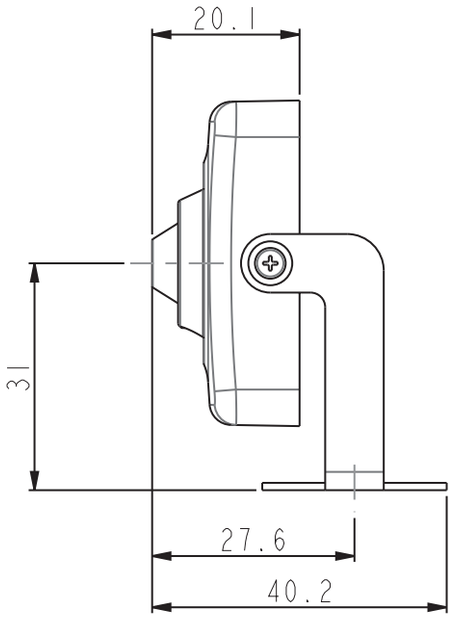
※ The specification for this product may change without prior notice for product improvement.

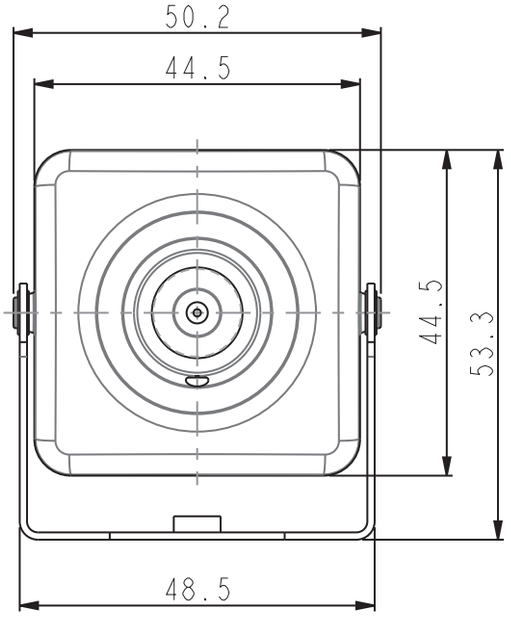
Specifications

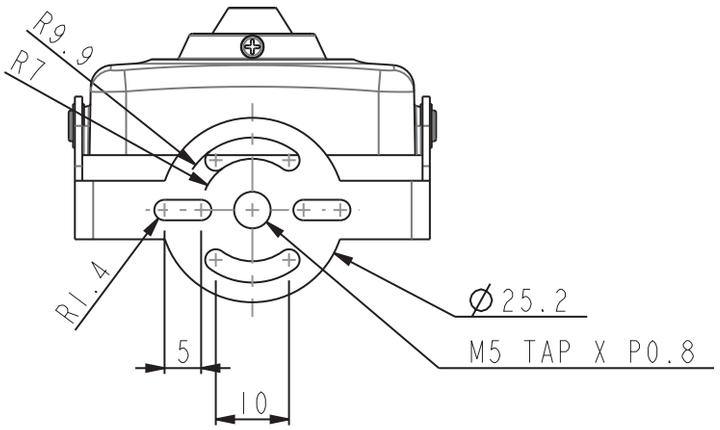
DIMENSIONS

Unit (mm)









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SALES NETWORK

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